

TNF-gamma

1	CCCAATCAAGAGAAATTCCATACTATCACCAAGTTGGCCGACTTCCAAGTCTAGTGCAGA	60
61	AATCCAAGGCACCTCACACCTAGAGTTCCATACCTCTGAGACTCCAGAGGAAGAACAA	120
121	GACAGTGCAGAAGGATATCTTAGAACCCACTGAAAACCTAGAACGTTGAAAAGGAAGCAT	180
181	ACCCCTCTGACCTATAAGAAAATTCAGTCTCCAGGGGATATCCTGTGCCCAAGAC	240
241	ATTGGTGTATCATTGACTAACAGCAAATTATTGTGGTGAGCTCTGAGTGAGGATTAG	300
301	GACCAGGGAGATGCCAAGTTCTATCACCTACCTCATGCCCTGTAAGACAAGTGTGTT	360
361	CCAATTGATGAATCCCCAGAAAACAGTTAGCCAATCACTTATGGCACAGAACGAAATT	420
421	TGAACGGCTGGTGCCCTGCCCTGTACGTAAACAAGAGAGGGATCGATGAGTTTAT	480
481	CTGAGTCATTGGAAAGGATAATTCTGCACCAAGCCATTCTAAACACAGAACGAAAT	540
541	AGGGGGATTCTTAACCTCATTGTTCCAGGATCATAGGTCTCAGGATAAAATTAAAAA	600
601	TTTCAGGTAGACCACTCAGTCAGAAAGGCAAAGTAATTGCCCAAGGTCACTAGTC	660
661	CAAGATGTTATTCTCTTGAACAAATGTTATGTCAGTCACATATTCTCATTCAATTCC	720
721	TCCCCAAAGCAGTTTAGCTGTAGGTATTCGATCACTTAGTCTATTGAAAATG	780
781	ATATGAGACGCTTTAACCAAAGTCTACAGTTCCAATGAGAAAATTAACTCTTTC	840
1	<u>M R R F L S K V Y S F P M R K L I L F L</u>	20
841	TTGTCTTCCAGTTGTGAGACAAACTCCCACACAGCACTTAAAGATCAGTTCCAGCTC	900
21	<u>V F P V V R Q T P T Q H F K N Q F P A L</u>	40
901	TGCACGGAAACATGAACTAGGCCTGGCCTTCACCAAGAACCGAATGAACATACCAACA	960
41	<u>H W E H E L G L A F T K N R M N Y T N K</u>	60
961	AATTCCCTGCTGATCCCAGAGTCGGGAGACTACTTCATTTACTCCAGTCACATTCCGTG	1020
61	<u>F L L I P E S G D Y F I Y S Q V T F R G</u>	80

FIG. 1A

TNF-gamma

1021	CGATGACCTCTGACTCCAGTCAAATCAGACAAGCAGCCCCACCAAACAAGCCAGACTCCA	1080
81	M T S E C S E I R Q A G R P N K P D S I	100
1081	TCACTGTGGTCATCACCAAGTAACAGACAGCTACCCGTAGCCAAACCCAGCTCCTCATGG	1140
101	T V V I T K V T D S Y P E P T Q L L M G	120
1141	CGACCAAGTCTGTATGCCAAGTAGCTAGCAACTGGTCCAGCCCACCTACCTCGGAGCCA	1200
121	T K S V C E V G S N W F Q P I Y L G A M	140
1201	TGTTCTCCTTGCAAGAAGGGACAAGCTAATGGTGAACGTCAGTACATCTCTTGGTGG	1260
141	F S L Q E G D K L M V N V S D I S L V D	160
1261	ATTACACAAAACAAGATAAAACCTCTTGGAGCCTCTTACTATAGGAGGAGGAAAT	1320
161	Y T K E D K T F F G A F L L *	175
1321	ATCATTATATCAAAGTCCTCTGCCACCGAGTTCTAATTTCTTGTCAAATGTAATT	1380
1381	TAACCAGGGTTTCTTGGGGGGGGAGTAGGGGGATTCCACAGGGACAACGGTTAGC	1440
1441	TATGAAATTGGGCCAAAATTCACACTCATGTCCTTACTGATGAGAGTACTAACTG	1500
1501	GAAAAAGGCTGAAGAGAGCAAATATATTAAAGATGGTTGGAGGATTGGGAGTTCT	1560
1561	AAATATTAAGACACTGATCACTAAATGAATGGATGATCTACTCGGGTCAGGATTGAAAGA	1620
1621	CAAATATTCACACCTCCCTGCTATACAATGGTCACCAAGTGGTCCAGTTATGTTCAAT	1680
1681	TTGATCATAAATTGCTTCATTCAAGGAGCTTGAAGGAAGTCCAAGGAAAGCTAGAA	1740
1741	AACAGTATAAACTTCAGAGGCAAATCCTTCACCAATTTCACATACTTCTGCT	1800
1801	TGCCTAAAAAAATGAAAAGAGAGTTGGTATGTCATGAATGTTCACACAGAAGGAGTT	1860
1861	GGTTTCATGTCATCACAGCATATGAGAAAAGCTACCTTCTTGTACACAG	1920
1921	ATATCTAAATAACGAAGTTGAGTTCACATGATATCCAAATACAACAGTTGCTTGTA	1980
1981	TTCAGTAGAGTTTCTTGGCCACCTATTTGTGCTGGTTACCTTAACCCAGAACAGA	2040

TNF-gamma

2041	CTATGAAAACAAGACAGACTCCACTCAAAATTATGAACACCACTAGATACTCCTG	2100
2101	ATCAAACATCAGTCAACATACTCTAAAGAATAACTCCAAGTCTTGGCCAGGCCACTGCC	2160
2161	TCACACCTGTAATCCAACACTTTGGAGGCCAAGGTGGTGGATCATCTAAGCCCCGA	2220
2221	GTTCAAGACCAGCCTGACCAACGTGGAGAAACCCATCTACTNAAAATACNAAATTAG	2280
2281	CCGGGCGTGGTAGCGCATGGCTGTAANCCTGGCTACTCAGGAGGCCAGGCAGAANAATT	2340
2341	NCTTGAACTGGGAGGCAGAGTTGCCGTGAGCCAGANCGCCATTGCACTCCAGCCT	2400
2401	GGTAACAACAGCAAAACTCTGTCCAAAAAAAAAAAAAA	2442

FIG. 1C

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MATCH WITH FIG. 2B

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MATCH WITH FIG. 2A

MATCH WITH FIG. 2C

EIG. 2B

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MATCH WITH FIG. 2B

TNFgamma	G	A	F	L	T	
TNFalpha	G	I	I	X	L	
TNFbeta	G	A	E	A	V	
LTbeta	G	R	V	M	V	G
FASL	G	L	Y	K	I	

FIG. 2C

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FIG. 3A

Tissue distribution of TNFgamma mRNA

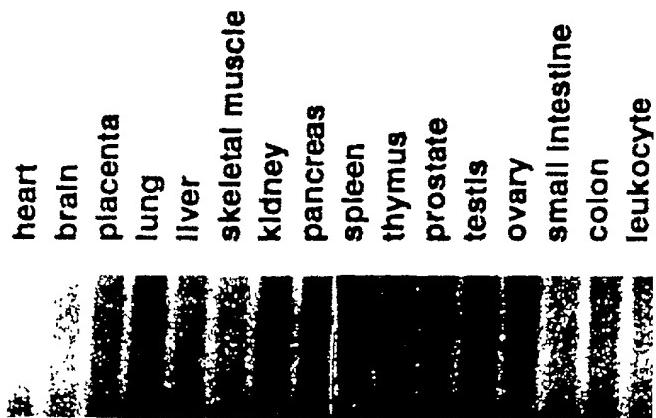
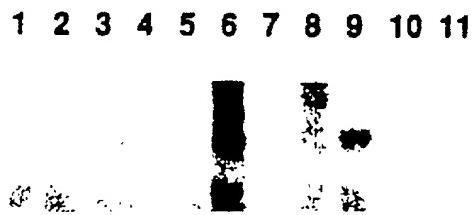


FIG. 3B

Expression of TNFgamma in HUVEC



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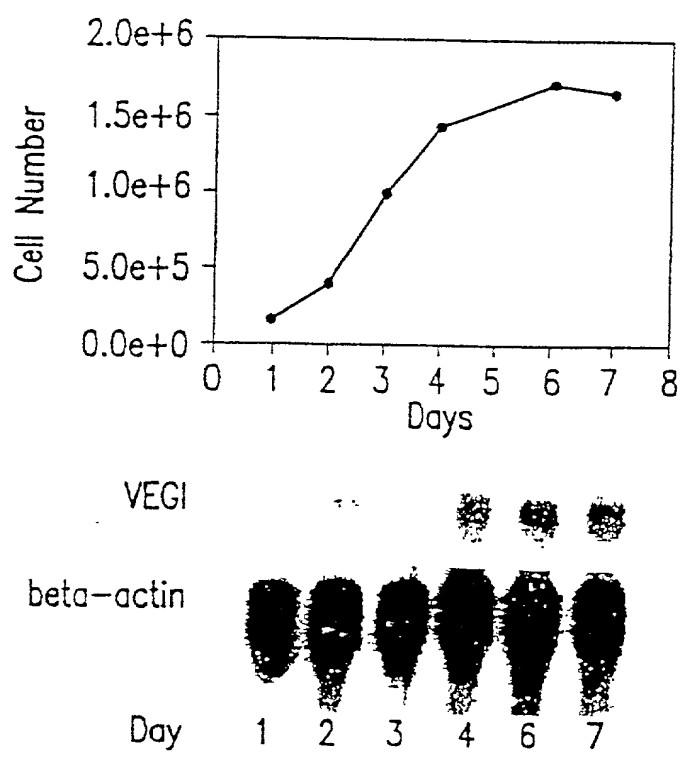


FIG.4

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Expression of TNF γ in *E. coli*

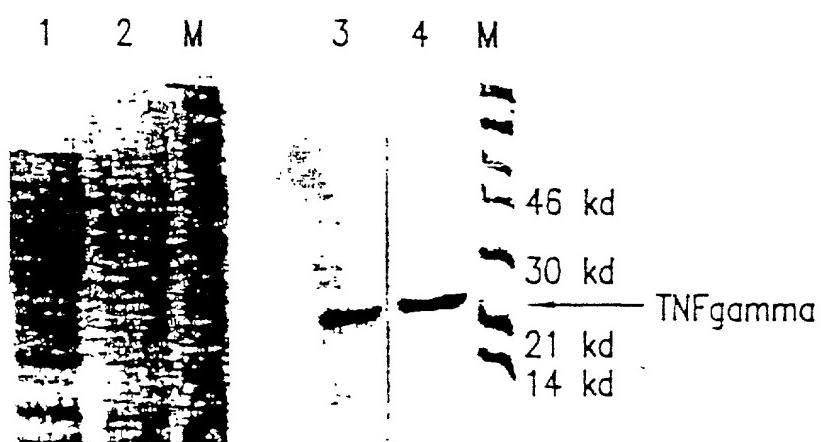


FIG.5

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Expression of TNF_γ in baculovirus system

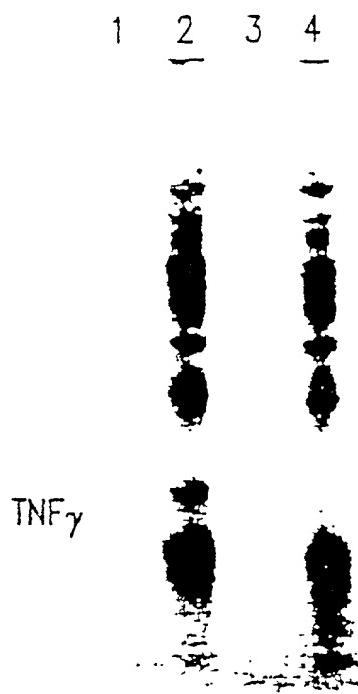


FIG.6

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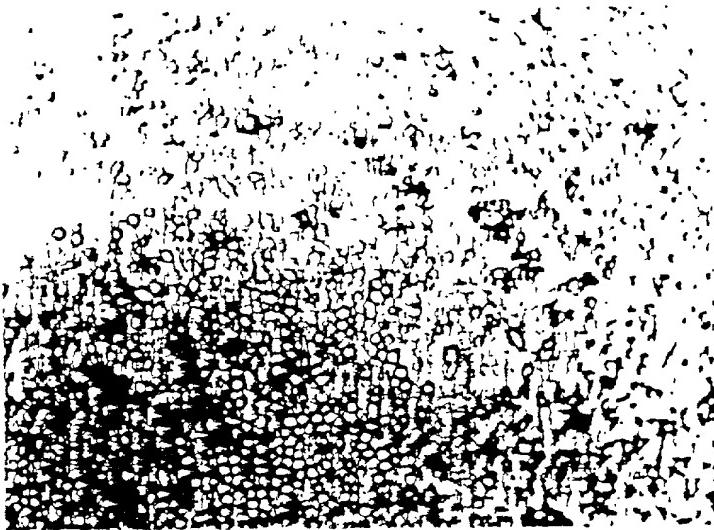
WEHI164
TNF α
Control



FIG. 7Ab
FIG. 7Aa

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WEHI164
TNF β



WEHI164
TNF γ

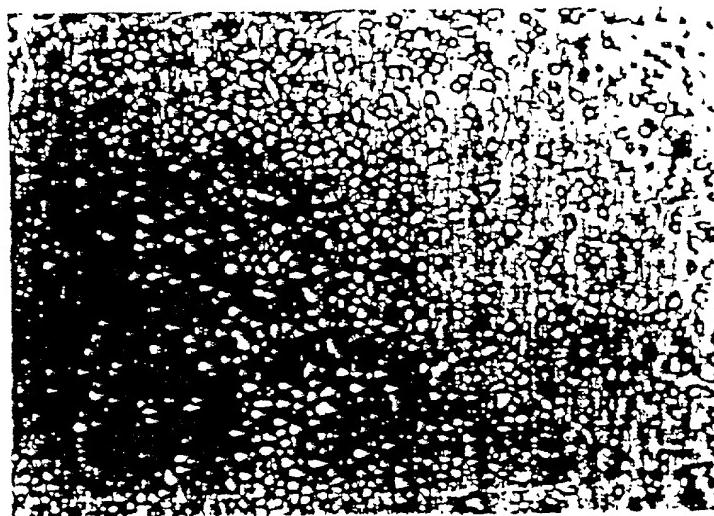
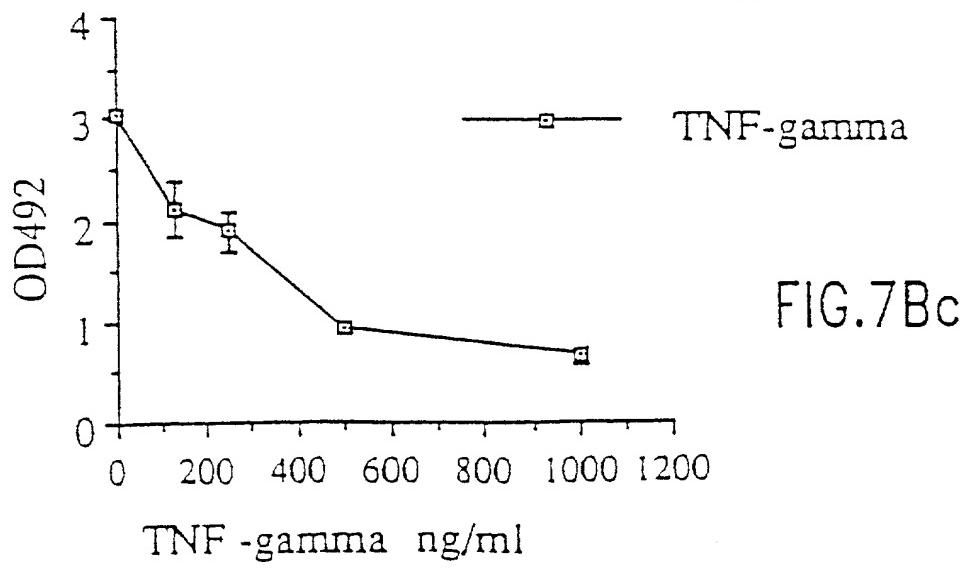
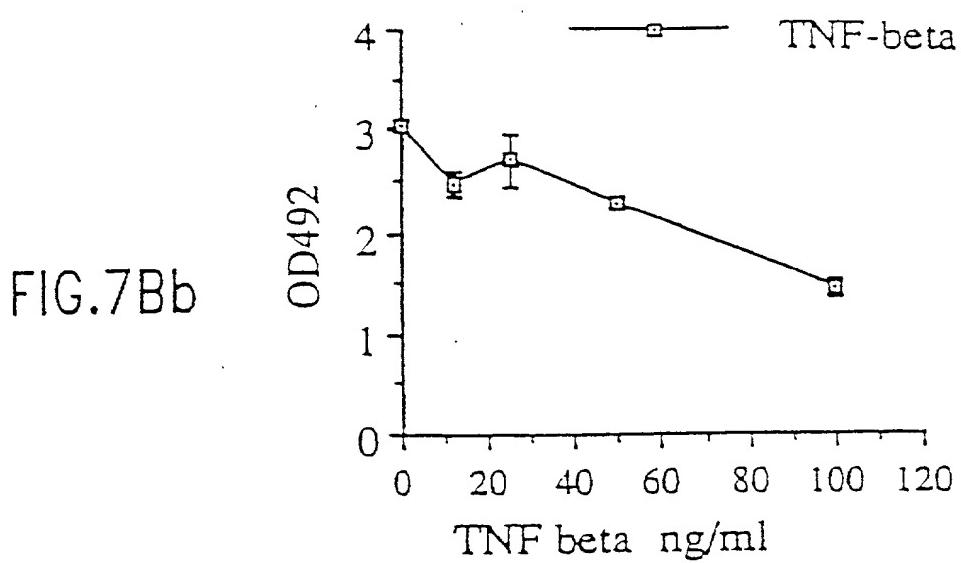
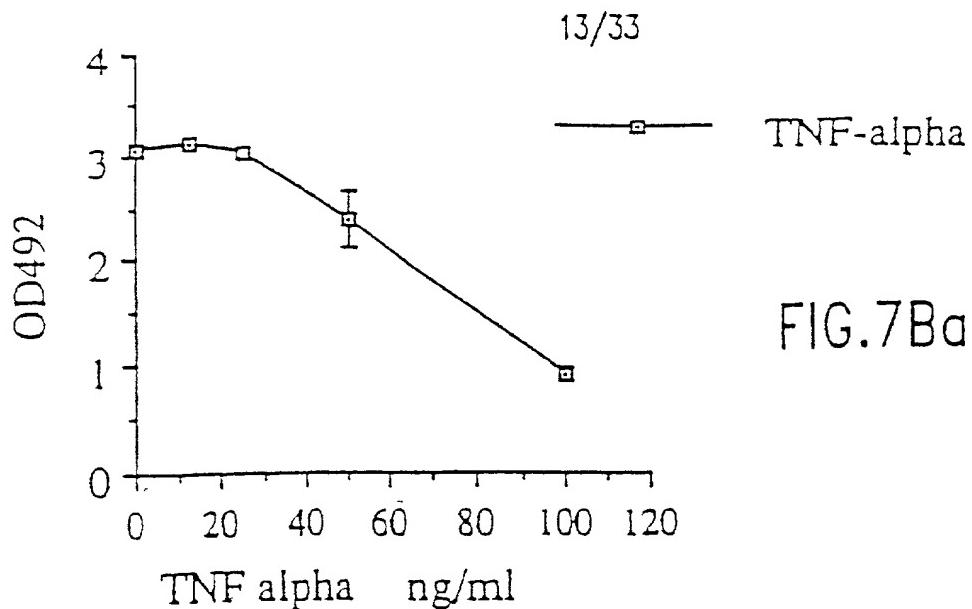


FIG. 7 Ad

FIG. 7 Ac



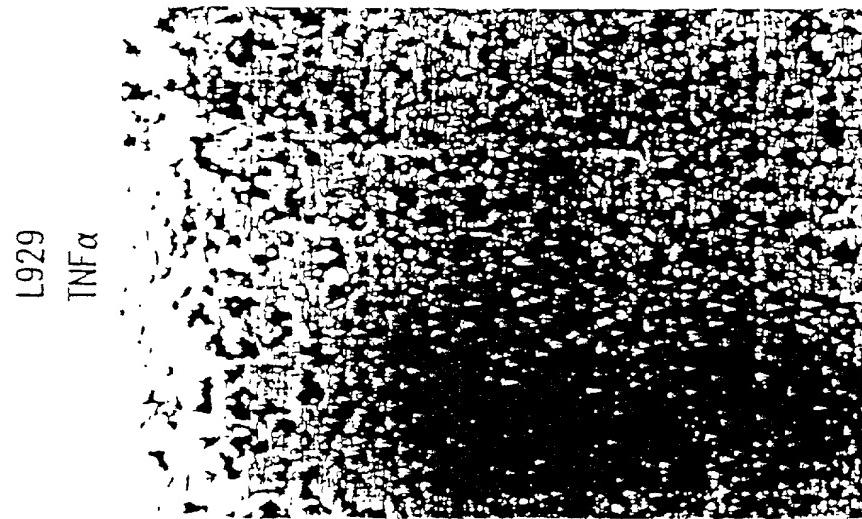


FIG. 8B

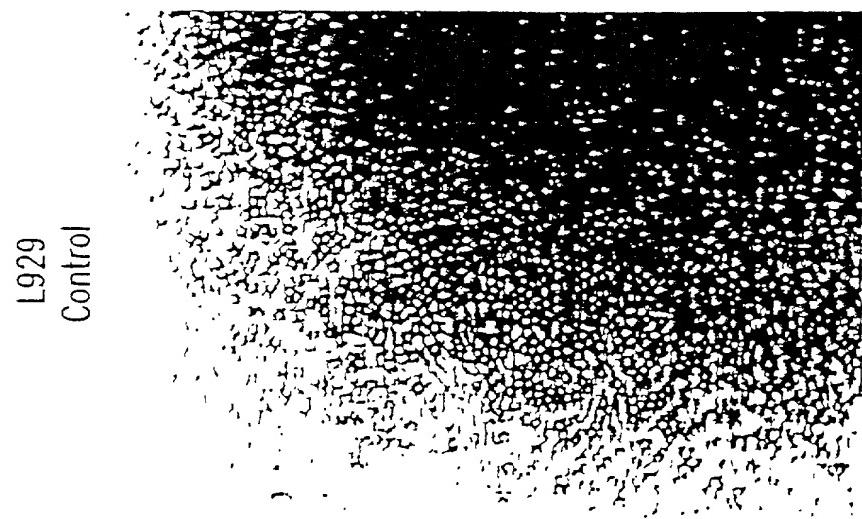
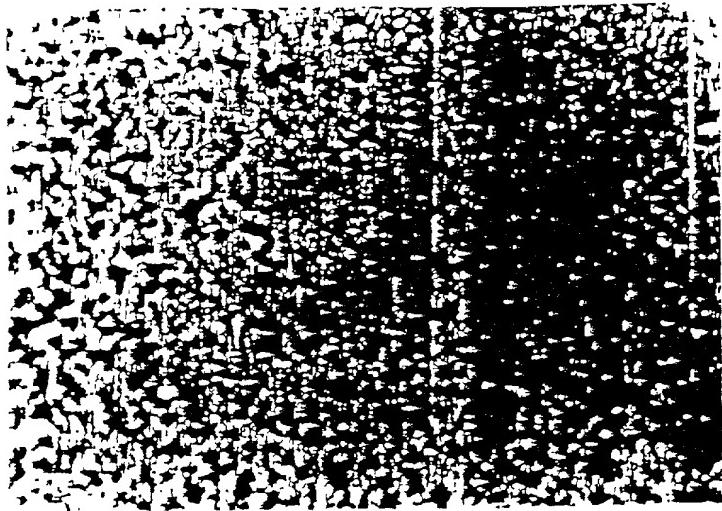


FIG. 8A

L929
TNF β



L929
TNF γ

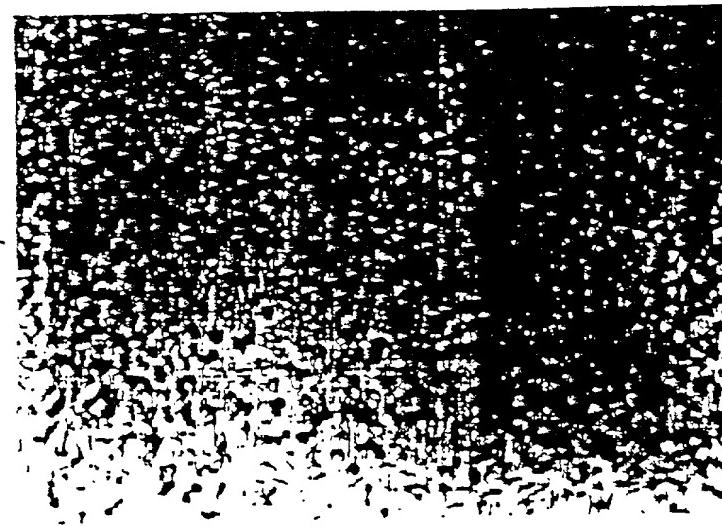
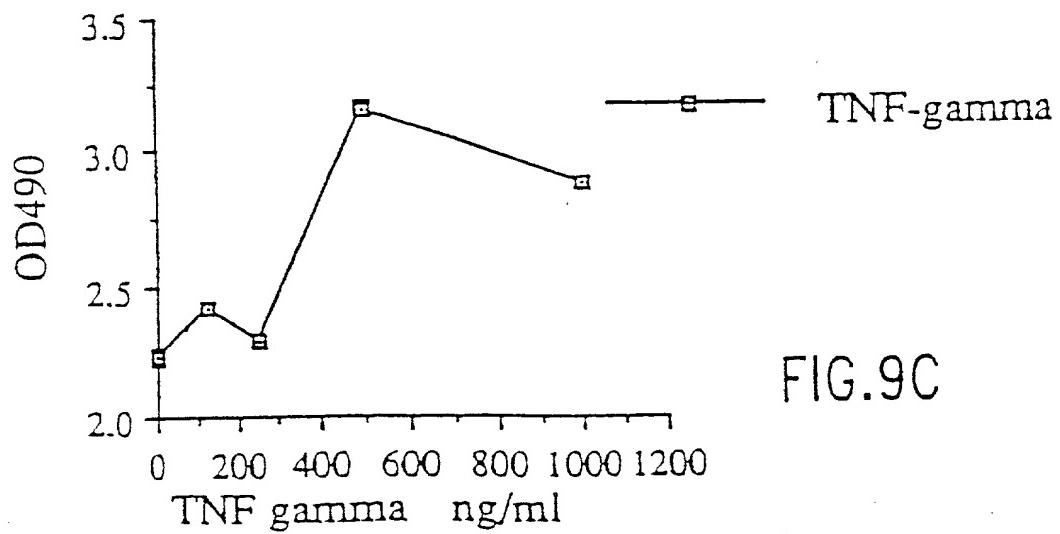
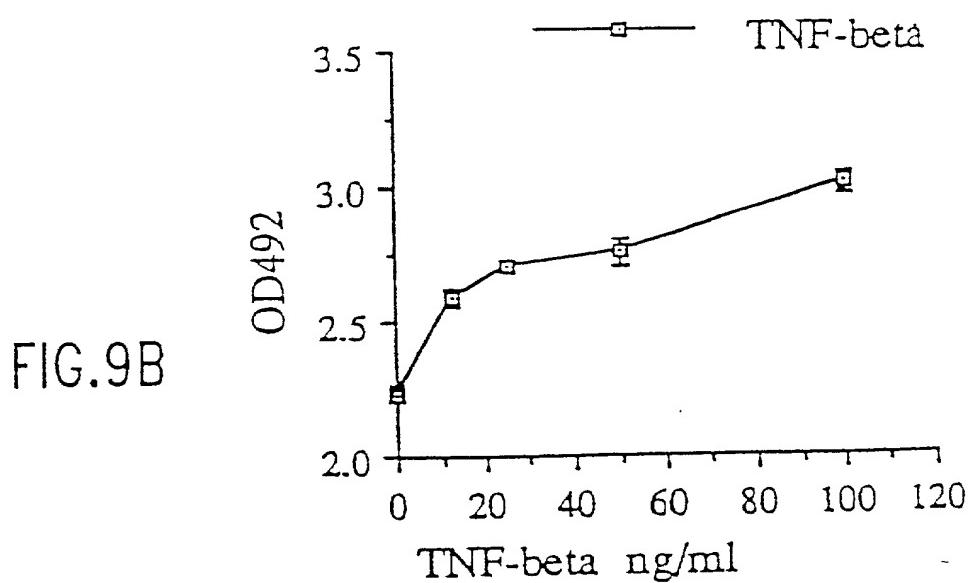
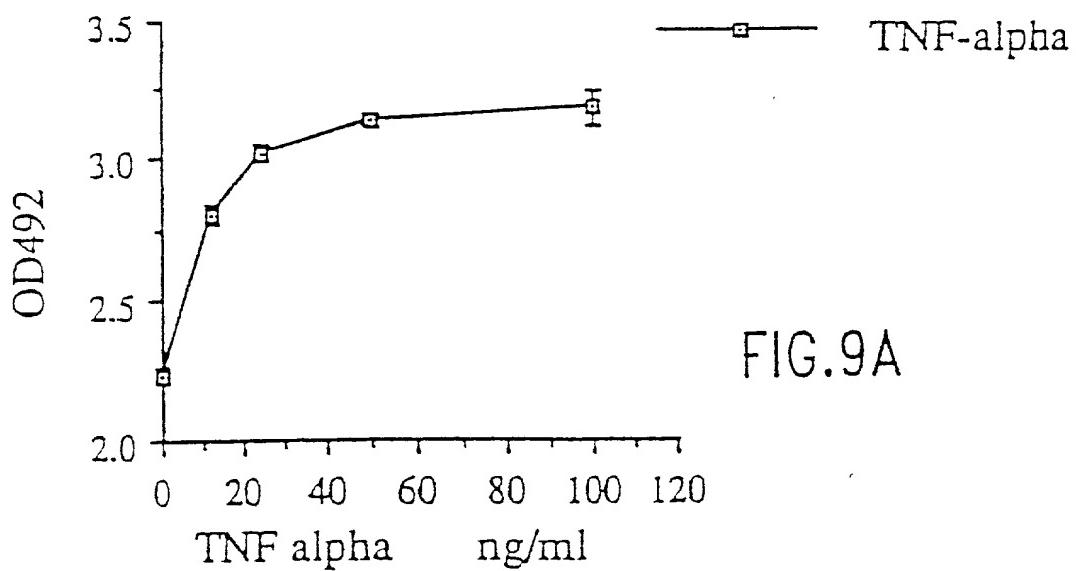


FIG. 8D

FIG. 8C



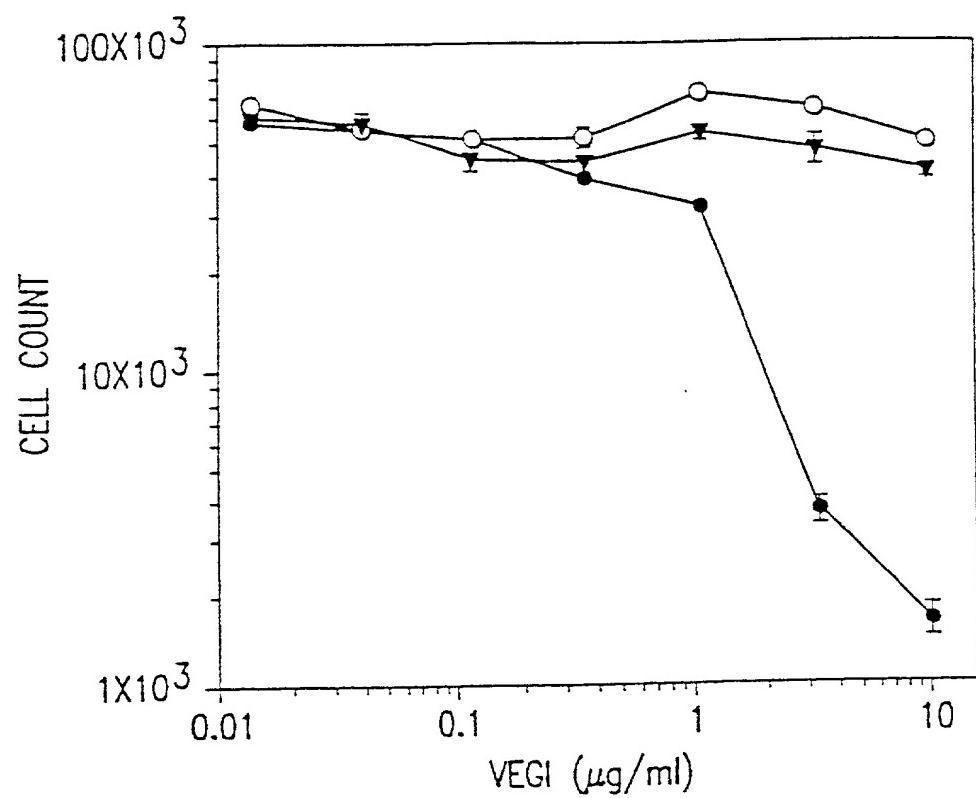


FIG.10

HL60
TNF α
Control

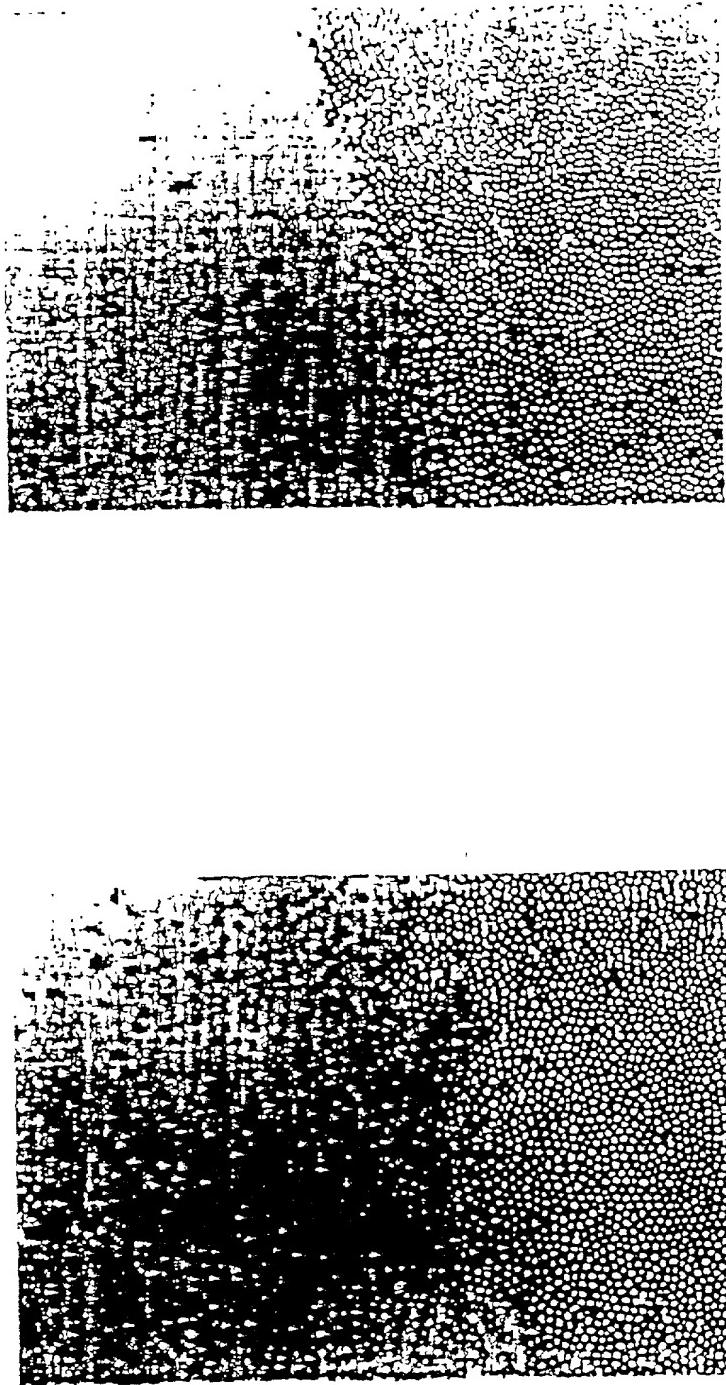


FIG. 11A

FIG. 11B

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HL60

TNF γ

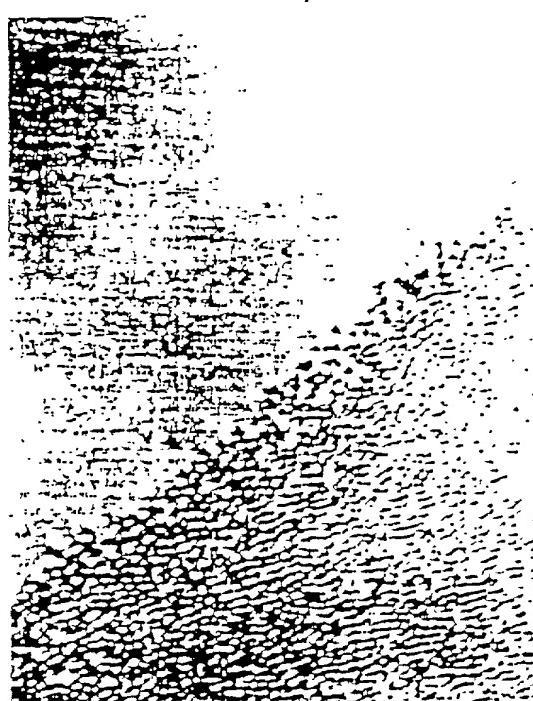


FIG.11C

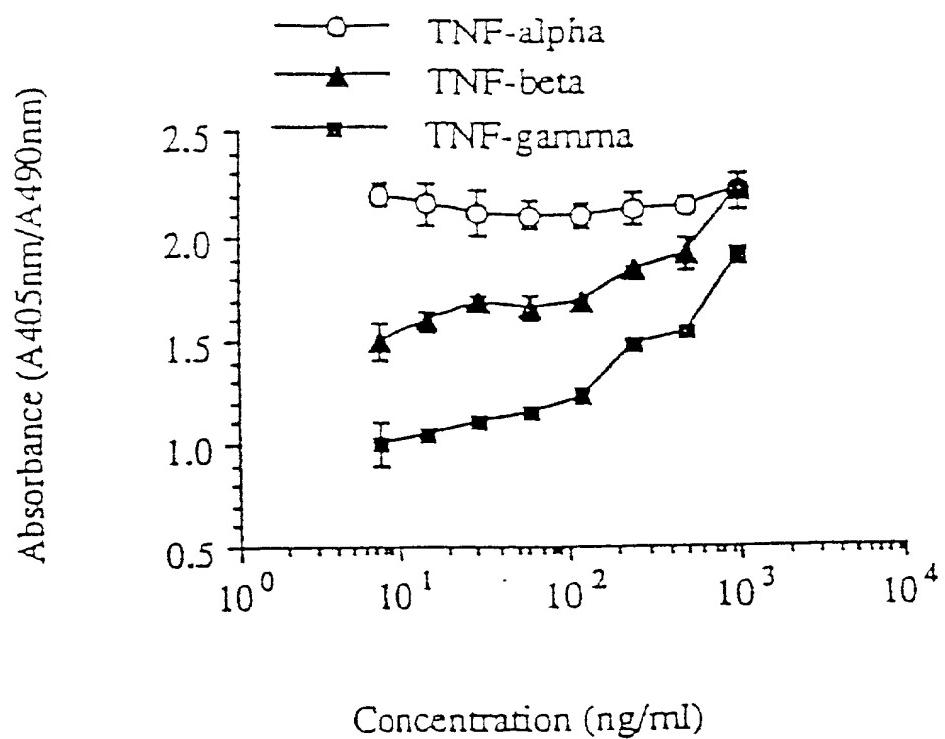


FIG.12

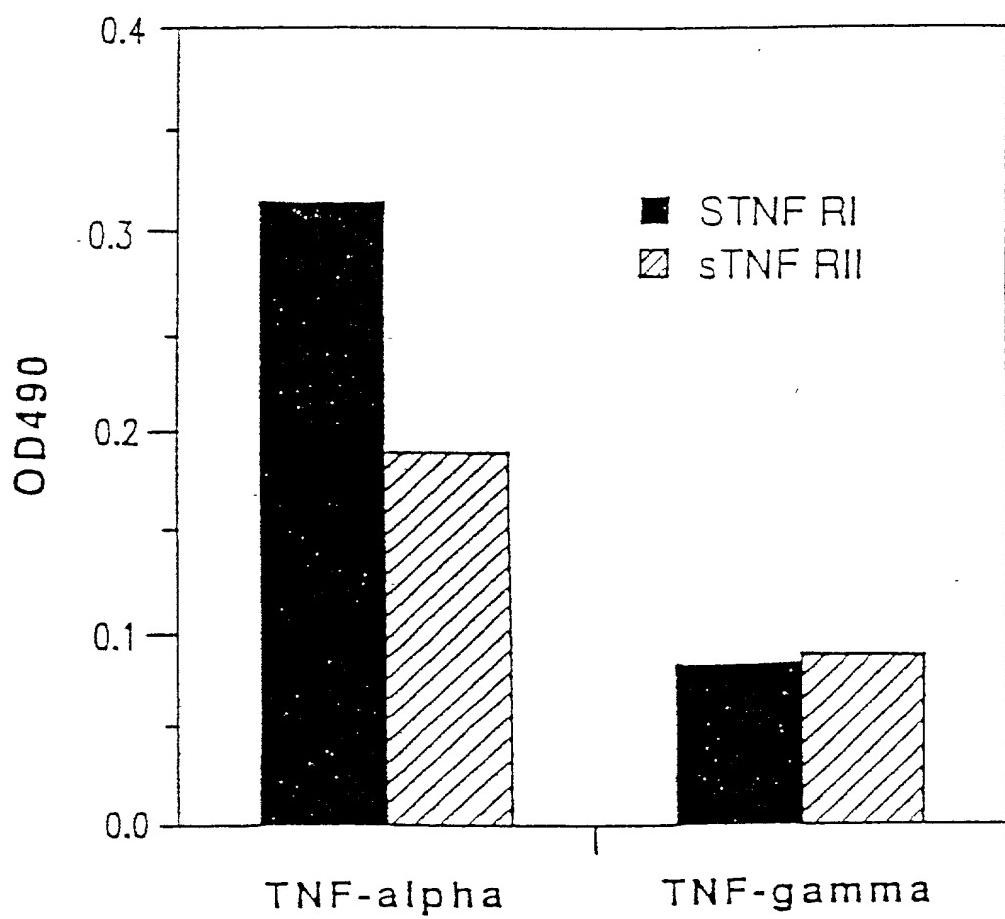


FIG.13

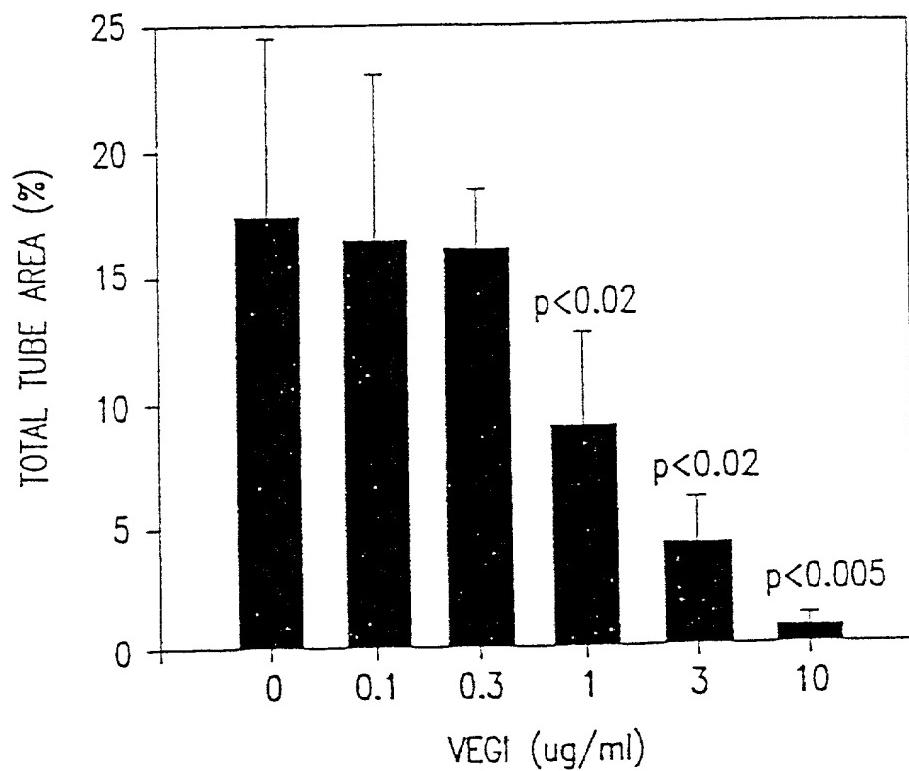


FIG. 14

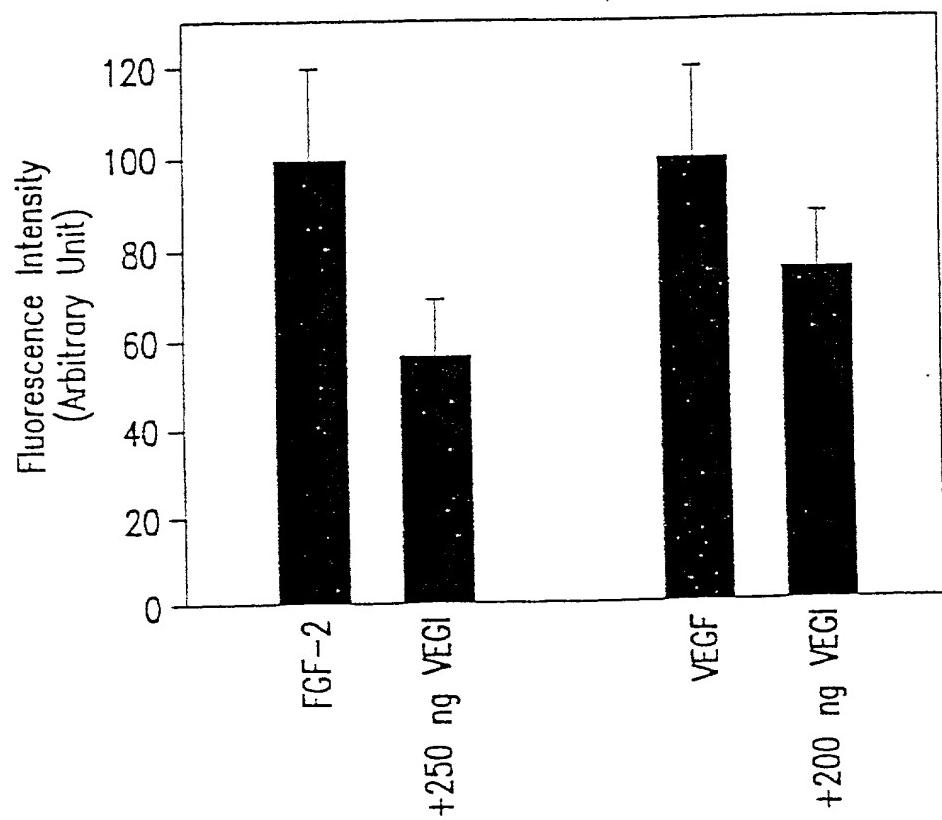


FIG. 15

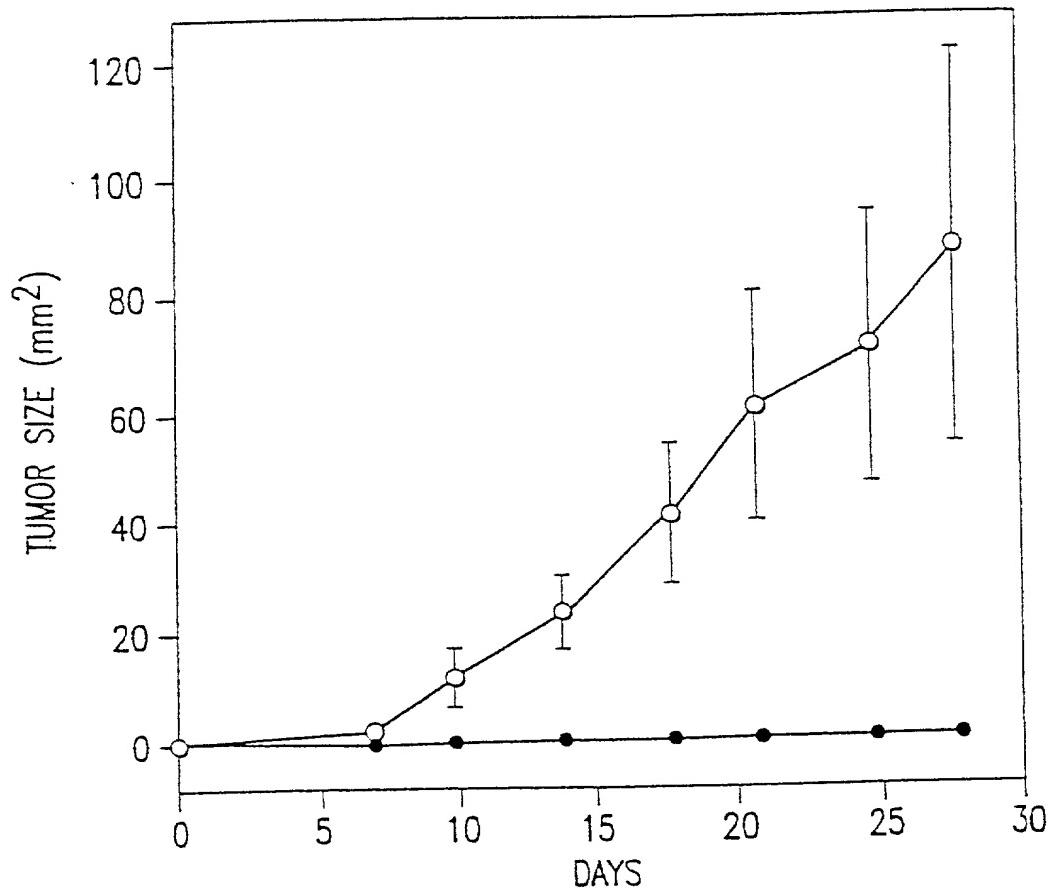


FIG. 16A

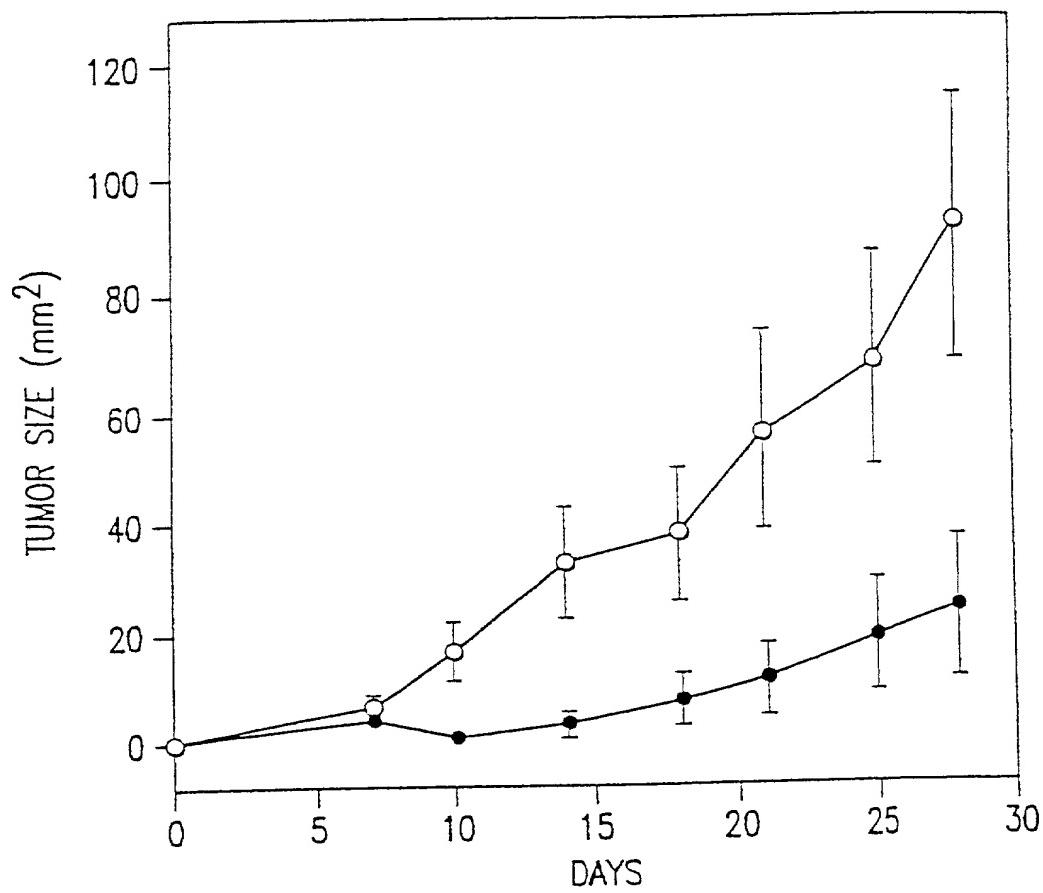


FIG. 16B

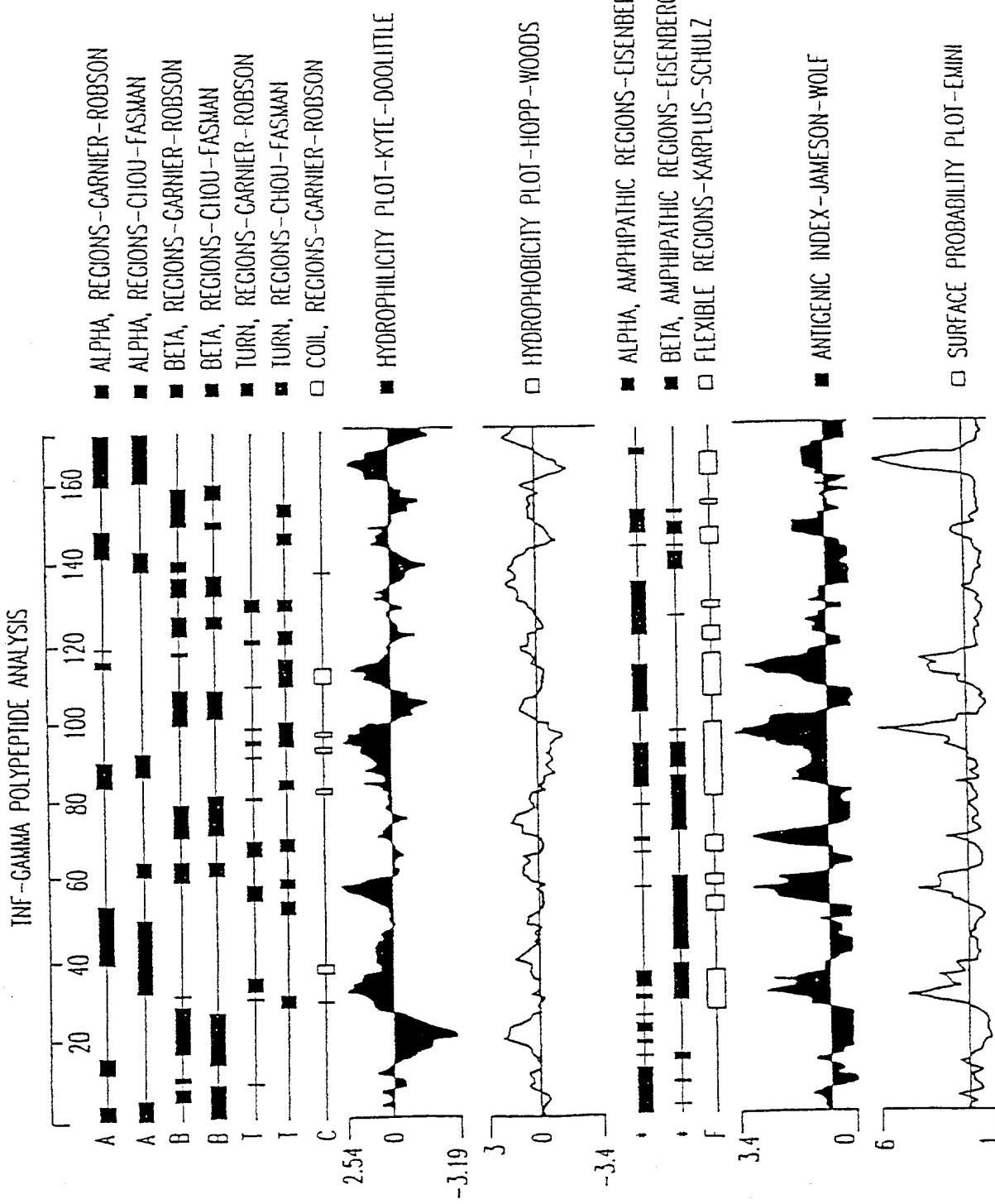


FIG. 17

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha	1 CCCAATCAAGAGAAATTCCATACTATCACCACTTGGCCGACTTCCAAG	49
TNF-gamma-alpha	50 TCTAGTGCAGAAATCCAAGGCACCTCACACCTAGAGTTCTATAACCTCTG	99
TNF-gamma-alpha	100 AGACTCCAGAGGAAGAACAAAGACAGTCAGAACGGATATCTTAGAACCA	149
TNF-gamma-alpha	150 CTCAAAACCTAGAACGTTGAAAAGGAAGCATAACCTCCTGACCTATAAGA	199
TNF-gamma-alpha	200 AAATTTCACTCTCCACGGGATATCCTGTGGCCAAGACATTGGTGT	249
TNF-gamma-alpha	250 ATCATTTCACTAACAGAGAAATTATTTGTGGTGAGCTCTGACTGAGGATTA	299
TNF-gamma-alpha	300 GGACCAGGGAGATGCCAAGTTCTATCACTTACCTCATGCCGTAAAGACA	349
TNF-gamma-alpha	350 AGTGTGGTCCATTGATGAATGGGAGAAACAGTTCAACCAATCAC	399
TNF-gamma-alpha	400 TTATGGCACAGAACGAAATTGAAGGGCTGGTGCCTGCCCTTCATA	449
TNF-gamma-alpha	450 CGTAAACAAGAGAGGCATCGATGAGTTTATCTGACTCATTGGAAAGG	499
TNF-gamma-alpha	500 ATAATTCTGCACCAAGCCATTCTAAACACAGAACAGAACGGATT	549
TNF-gamma-alpha	550 CCTAACCTCATGTTCTCAGGATCATAGGCTCAGGATAAATTAAAA	599
TNF-gamma-beta	1 ATGGCCGAGGATCTGGACTGAGCTTGGAAACACCCAGTGCGAA	48
TNF-gamma-alpha	600 ATTTTCAGGTCAAGACACTCAGTCTCAGAACGGCAAAGTAATTCCCCA	649
TNF-gamma-beta	49 ATGCTGCCAGAGCACGGCAGCTCCAGGCCCAGGCCAGGACAGCGC	98
TNF-gamma-alpha	650 GGTCACTAGTCCAAGATGTTATTCTCTGAACAAATGTATGTCAGT	699
TNF-gamma-beta	99 ACGCTGGCTCTCACCTGCTGCCGGTGTGCTCCCTTCAGGAC	148
TNF-gamma-alpha	700 CACATATTCTCATTCACTCCCTCCCCAACCGAGTTTAGCTGTAGGA	749
TNF-gamma-beta	149 TCACCAACATACCTGCTTGTCAGCCAGCTCCGGCCAGGGAGAGCCCTGT	198
TNF-gamma-alpha	750 TATTGATCACTTAGCTATTTGAAAATGATATGAGACGCTTTAAG	799
TNF-gamma-beta	199 GTCCAGTTCCAGGCTCTAAAGGACAGGAGTTGCACCTCACATCAGCA	248

FIG. 18A

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TNF-gamma-alpha vs. TNF-gamma-beta

FIG. 18B

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TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 1450 TCGGG.CCAAAATTTCACACTTCATGTGCCTTACTGAGAGTACTAAC 1498
||||||| |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
TNF-gamma-beta 898 TGGGGCCC AAAATTTCACACTTCATGTGCCTTACTGAGAGTACTAAC 947
||||||| |||||||||||||||||||||||||||||||||||||||||||||||||||||||||
TNF-gamma-alpha 1499 TGGAAAAGGCTGAAGAGAGCAAATATAATTATAAGATGGTTGGAGGAT 1548
||||||| |||||||||||||||||||||||||||||||||||||||||||||||||||||
TNF-gamma-beta 948 TGGAAAAGGCTGAAGAGAGCAAATATAATTATAAGATGGTTGGAGGAT 997
||||||| |||||||||||||||||||||||||||||||||||||||||||||||||
TNF-gamma-alpha 1549 TGGCGAGTTCTAAATATAAGACACTGATCACTAAATGAATGGATGATC 1598
||||||| |||||||||||||||||||||||||||||||||||||||||||||||||
TNF-gamma-beta 998 TGGCGAGTTCTAAATATAAGACACTGATCACTAAATGAATGGATGATC 1047
||||||| |||||||||||||||||||||||||||||||||||||||||||||
TNF-gamma-alpha 1599 TACTCGGGTCAGGATTGAAAGAGAAATATTCAACACCTCCCTGCTATAAC 1648
||||||| |||||||||||||||||||||||||||||||||||||||||||||
TNF-gamma-beta 1048 TACTCGGGTCAGGATTGAAAGAGAAATATTCAACACCTCCCTGCTATAAC 1097
||||||| |||||||||||||||||||||||||||||||||||||
TNF-gamma-alpha 1649 AATGGTCACCAGTGTCAGTTATTGTTCAATTGATCATAAATTGCTT 1698
||||||| |||||||||||||||||
TNF-gamma-beta 1098 AATGGTCACCAGTGGCCA 1116
|||||||
TNF-gamma-alpha 1699 CAATTCAAGGACCTTGAAGGAAGTCCAAGGAAAGCTCTAGAAAACAGTAT 1748
|||||||
TNF-gamma-alpha 1749 AAACTTTCAGAGGCAAAATCCTCACCAATTTCACATACTTCATGC 1798
|||||||
TNF-gamma-alpha 1799 CTTGCC TAAAAAAATGAAAAGAGAGTTGGTATGTCTCATGAATGTCAC 1848
|||||||
TNF-gamma-alpha 1849 ACAGAAGGAGTTGGTTTCATGTCATCTACAGCATATGAGAAAACCTACC 1898
|||||||
TNF-gamma-alpha 1899 TTTC TTTGATTATGACACAGATATCTAAATAAGGAAGTTGACTTCA 1948
|||||||
TNF-gamma-alpha 1949 CATGTATATCCCAAATACAACAGTTGCTTGTATTCACTAGAGTTCTTG 1998
|||||||
TNF-gamma-alpha 1999 CCCACCTATTTGCTGGTTCTACCTTAACCCAGAAGACACTATGAAA 2048
|||||||
TNF-gamma-alpha 2049 AACAAAGACAGACTCCACTCAAATTTATATGAACACCACTAGATACTTCC 2098
|||||||
TNF-gamma-alpha 2099 TGATCAAACATCAGTCAACATACTCTAAAGAATAACTCCAAGTCTGGCC 2148
|||||||
TNF-gamma-alpha 2149 AGCCCCAGTGGCTCACACCTGTAATCCCAACACTTGGAGGCCAAGGTG 2198
|||||||
TNF-gamma-alpha 2199 GGTGGATCATCTAAGGCCGGAGTTCAAGACCAGCCTGACCAACGTGGAG 2248
|||||||

FIG. 18C

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TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 2249 AAACCCATCTACTNAAAATACNAAATTAGCCGGCGTGGTAGCCAT 2298
TNF-gamma-alpha 2299 GGCTGTAANCCTGGCTACTCAGGAGGCCGAGGCAGAANAATTNCTTGAAC 2348
TNF-gamma-alpha 2349 TGGGGAGGCAGAGGTGCGGTGACCCCAGANCCGCCATTGCACTCCACC 2398
TNF-gamma-alpha 2399 CTGGTAACAACAGCAAAACTCTGTCCAAAAAAAAAAAAAAA 2442

FIG. 18D

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-beta	1 MAEDLGLSFGETASVEMLPFHGSCRPKARSSARWALTCCLVLLPFLAGL 50
TNF-gamma-alpha	1 MRRFLSKVYSFPMRKLILFLVFP 23
TNF-gamma-beta	51 TTYLLVSQRLRACGEACVQFQALKGQEFAPSHQQVYAPLRADGDKPRAHLT 100
TNF-gamma-alpha	24 WVRQPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKFLLIPESGODYFIY 73
TNF-gamma-beta	101 WVRQPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKFLLIPESGODYFIY 150
TNF-gamma-alpha	74 SQVTFRGMTSECSEIRQAGRPNKPDSITWITKVTDSYPEPTQLLMGTKS 123
TNF-gamma-beta	151 SQVTFRGMTSECSEIRQAGRPNKPDSITWITKVTDSYPEPTQLLMGTKS 200
TNF-gamma-alpha	124 VCEVGSNWFQPITYLGAMFSLOEGDKLMVNVDISLVDYTKEDKTFGAFL 173
TNF-gamma-beta	201 VCEVGSNWFQPITYLGAMFSLOEGDKLMVNVDISLVOYTKEKTFGAFL 250
TNF-gamma-alpha	174 L 174
TNF-gamma-beta	251 L 251

FIG. 19

TNF-gamma-beta

1	ATGGCCGAGGATCTGGACTGACCTTGGGAAACACCCAGTGTGAAATGCTGCCAGAG	60
1	M A E D L G L S F G E T A S V E M L P E	20
61	CACGGCAGCTGCAGGCCAACGCCAGGACCAGCACCGTGGCTCTACCTGCTG	120
21	H G S C R P K A R S S S A R W A L T C C	40
121	CTGGTCTTGCCTCCCTTCCTCCACGGACTCACCAACATAACCTCCTTCAGCCAGCTCCGG	180
41	L V L L P F L A G L T T Y L L V S Q L R	60
181	GCCCAGGGAGAGCCCTGTGTCAGTTCCAGGCTCTAAAAGCACAGGACTTTCACCTTC	240
61	A Q G E A C V Q F Q A L K G Q E F A P S	80
241	CATCAGCAAAGTTATGCCACCTCTTAGACCAAGGAGATAAGCCAACGGCACACCTGACA	300
81	H Q Q V Y A P L R A D G D K P R A H L T	100
301	GTTGTGAGACAAACTCCCACACAGCACTTAAAAATCAGTCCCAAGCTCTCCACTGGAA	360
101	V V R Q T P T Q H F K N Q F P A L H W E	120
361	CATGAACTAAGCCCTGGCTCACCAAGAACCAATGAACATACCAACAAATTCCGTG	420
121	H E L G L A F T K N R M N Y T N K F L L	140
421	ATCCCAGAGTCGGGAGACTACTTCATTACTCCAGGTACATTCGTGGATGACCTCT	480
141	I P E S G D Y F I Y S Q V T F R G M T S	160
481	GAGTGCAGTGAAATCAGACAAGCAGGCCAACAAAGCCAGACTCCAATCACTGGTC	540
161	E C S E I R Q A G R P N K P D S I T V V	180
541	ATCACCAAGGTAAACAGACAGCTACCCGTGACCCAACCCAGCTCTCATGGGGACCAAGTCT	600
181	I T K V T D S Y P E P T Q L L M G T K S	200
601	GTATGCCAAGTAGGTAGCAACTGGTCCAGCCATCTACCTCGGAGCCAATGTTCTCTTG	660
201	V C E V G S N W F Q P I Y L G A M F S L	220
661	CAAGAACGGACAACCTAAATGGTAACGTCAGTGACATCTCTTGGTGGATTACACAAA	720
221	Q E G D K L M V N V S D I S L V D Y T K	240
721	GAAGATAAAACCTCTTGAGGCCCTTACTATAGGAGGAGGAAATATCATTATATG	780
241	E D K T F F G A F L L	251
781	AAAGTCCTCTGCCACCGAGTCCTAATTTCTTGTCAAATGTAATTATAACCAAGGGT	840
841	TTTCTTGGGCCGGAGTAGGGCATTCCACAGGGACAACGGTTAGCTATGAAATTGG	900

FIG. 20A

TNF-gamma-beta

901 GGCCCCAAAATTCACACTCATGTGCCTTACTGATGAGAGTACTAACTGGAAAAAGGCTG 960
961 AAGAGACCAAATATATTATAAGATGGTTGGAGGATTGGCGAGTTCTAAATATTAAGA 1020
1021 CACTGATCACTAAATGAATGGATGATCTACTCGGGTCAGGATTGAAAGAGAAATATTCA 1080
1081 ACACCTTCTGCTATACAATGGTCACCAGTGTTCCA 1116

FIG. 20B